IN THE DRAWINGS

Please amend the drawings as follows:

The attached drawing sheet includes changes to Figure 7.

Attachment: Replacement Sheets

REMARKS

Introduction

Claims 1-3, 6, 7, 9-18, and 20-24 are pending in the present application.

In the above amendments, Applicants propose to amend claims 1 and 6.

Claims 1, 6, 18, and 22 are the independent claims of the application.

In the Final Office Action mailed on 3/29/2006, the Examiner objected to the drawings, specification, and claims. Further, claims 1-3, 6, 7, 9-14, 17, 18, and 20-24 were rejected under 35 U.S.C. § 102 as being anticipated by the admitted prior art shown in Figure 5 (the "admitted prior art"); and claims 15 and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art and further in view of Xu *et al.*, U.S. Patent Application Publication No. 2001/0052104 ("Xu").

Applicants respectfully respond to the Final Office Action.

Finality of the Action

The Final Office Action was the first Action after filing of a Request for Continuing Examination under 37 C.F.R. § 1.114 (RCE). Notwithstanding this fact, the Action was made final. The reason given for the finality was that "[a]ll claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114," citing MPEP § 706.07(b). Applicants request withdrawal of the finality of the Action for the following reason.

In the Reply to Office Action filed with the RCE, independent claims 18 and 22 were amended by addition of limitations. While the present Final Office Action rejected these claims on the same art as the previous Action, it did not assert that the additional limitations in these claims add nothing to the invention. The Final Office Action did not make any showing that the invention of claims 18 and 22 as they stand now is the same as it was in the claims of the application prior to the amendment filed with the RCE. It appears that the Examiner's position is that, as a rule, the first Office Action after a submission of an RCE can be made final if the

claims can be rejected on the same art as was used to reject the claims prior to the RCE. This is not the rule of procedure in the Office.

Claims 18 and 22 recite additional limitations that were not presented in these claims prior to the submission of the RCE under 37 C.F.R. § 1.114. Therefore, these claims are not "drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114," as required by MPEP § 706.07(b). It follows that the claims should not have been finally rejected. Applicants request withdrawal of the finality of the Action and entry of the above amendment.

Additionally, amendment of claim 6 complies with objection or requirement as to form and adopts the Examiner's express suggestion. The amendment should therefore be entered even if finality of the action is maintained. MPEP §§ 714.12 & 714.13.

Drawings

In the Final Office Action, the drawings were

> objected to as failing to comply with 37 CFR 1.84(p)(4), because reference character "707", "704", "702", "701", "706", "705", "708" has been used to designate both, "states i-1" and "states i" and "states i+1".
>
> If the intention of the Applicant id to designate to designate the same number for all the different computational nodes C_k(i.e.), then it seems that character "703" in FIG. 7 should be "702". This will be inconsistence with FIG. 6 where properly each states has been labeled with different numbers (see FIG. 6 blocks "604" and "605"; "609" and "610"; "606" and "607"; and "612" and "613")

Final Office Action, at 2. Applicants agree that reference designation "703" in Figure 7 should be "702." Figure 7 has been revised accordingly, and one replacement drawing sheet is submitted herewith. Applicants disagree, however, that Figure 7 (as currently revised) is inconsistent with Figure 6 and fails to comply with 37 C.F.R. § 1.84(p)(4). It appears there is no requirement that if multiple elements are designated with different reference numerals in one Figure showing some embodiments, then similar elements of other embodiments in other Figures may not be designated with a single reference numeral.

Applicants submit that the amendment to Figure 7 does not make any substantive changes or introduce any new material, and has been made in accordance with the Examiner's understanding of Figure 7. Therefore, approval and entry of the above amendment to the drawings is respectfully requested.

Specification

In the Final Office Action, the Examiner objected to the disclosure, and suggested three changes to numbered paragraph [0030] to eliminate purported informalities.

The first two suggestions were to bring commas outside quotation marks in two places. Applicants respectfully traverse these objections. Even if style were a proper target of objections to the specification, the standard usage is to place commas inside quotations marks. See, for example, The New York Times Manual of Style and Usage 278 (Siegal and Connolly eds., 1999) ("Periods and commas, in American usage, always go inside the closing quotation marks, regardless of grammatical logic."); see also Strunk and White, The Elements of Style 36 (4th ed. 2000) ("Typographical usage dictates that the comma be inside the [quotation] marks, though logically it often seems not to belong there.")

The third suggestion was to replace D_{K+1} with D_{k+1}. The numbered paragraph [0030] has been amended in accordance with this suggestion. Applicants believe that this change does not add new matter to the application and is adequately supported by the original specification and drawings.

Claim Objections

The Examiner objected to claims 6, 7, and 9-13, noting that the recitation of "computational node C at different time instances in said least two subsets occurs concurrently" in claim 6 (from which claims 7 and 9-13 depend) is improper. The Examiner suggested that the word "at" be inserted between the words "said and "least." Claim 6 has been amended in accordance with the Examiner's express suggestion.

Claim Rejections

Claim 1

In rejecting independent claim 1, the Final Office Action asserted (at page 5) that the admitted prior art in Figure 5 discloses that the triggering schedule includes triggering all said computational nodes C and D at different instances of time essentially concurrently for each decoding iteration. The rationale for this statement was as follows: "block 501 (computational node C), is the first decoder with inputs, essentially, X (information data) and Y (fist parity), when the first decoder finish, pass the output to block 502 (computational node D), that at a different instant in time, essentially concurrently, with inputs X (information data) and Z (second parity, or parity from de second encoder) produces the first estimation of the data in iteration zero)." Final Office Action, at 5-6.

Applicants respectfully request the Examiner to reconsider this rejection. First, Figure 5 does not disclose that all computational nodes in block 501 are triggered essentially concurrently for each iteration. Second, Figure 5 does not disclose that all computational nodes in block 502 are triggered concurrently for each iteration. Figure 5 is silent regarding the triggering schedules of the blocks 501 and 502. Third, as the Examiner apparently recognizes in the text quoted in the immediately preceding paragraph, data is passed to block 502 "when the first decoder finish[es.]" Thus, in each iteration, the nodes in block 501 are triggered at different times than the nodes in block 502. It follows that the nodes in the blocks 501 and 502 are not triggered essentially concurrently for each decoding iteration.

The meaning of "essentially" in the phrase "essentially concurrently" is defined in numbered paragraph [00048] of the specification, which teaches, in the pertinent part, as follows:

> In accordance with an embodiment, all the computation nodes 704 and 706 may be triggered essentially concurrently. As such, in one step all the computational nodes are once updated. Each time all the computational nodes are updated, the decoding process may have completed on decoding iteration. The concurrent trigger of the computational nodes 704 and 706 may be repeated to achieve one or more iterations of the decoding process.

Specification, par. [00048]. Thus, essentially concurrent triggering of all computation nodes means that the nodes are updated in one step to complete one decoding iteration; the results of

updating of some nodes are not used in updating other nodes during the same iteration. Figure 5 does not disclose this limitation.

At least for this reason, Applicants respectfully submit that Figure 5 does not anticipate claim 1, even as the claim existed prior to the above amendment. The amendment of claim 1 is intended to incorporate expressly the definition of "essentially concurrently," as explained above by reference to the specification, into the body of the claim.

Claim 6

The method of claim 6, as amended above, includes partitioning said computational node C at time instances C_0, C_1, C_2, ..., C_N into at least two subsets, wherein said triggering schedule includes triggering updates of computational nodes C in a sequence at different time instances in each subset, and wherein said triggering of computational node C at different time instances in said *at* least two subsets occurs concurrently. Thus, there are at least two subsets of nodes C. In each subset, the nodes are triggered in sequence, but concurrently in the different subsets.

In rejecting independent claim 6 as anticipated by the admitted prior art of Figure 5, the Final Office Action (at page 7) asserted that "[t]o produce the first iteration (here the term turbo) the information from the decoder 502 have to go to the first decoder 501 as extrinsic information, and the first decoder have to run again producing a new output, for this reason, the computational node C have to have at least two subsets, to produce the first iteration."

Even if nodes of the decoder 501 during different iterations can be understood as different subsets, such nodes are not triggered concurrently in the different subsets. For example, one iteration follows another iteration. In contrast, claim 6 recites that "said triggering of computational node C at different time instances in said at least two subsets occurs concurrently." At least for this reason, Applicants respectfully submit that Figure 5 does not anticipate claim 6.

Claims 18 and 22

Independent claims 18 and 22 recite "concurrent triggering of each node of a first plurality of said computational nodes C, and concurrent triggering of each node of a second plurality of computational nodes D." In rejecting these claims the Final Office Action essentially

repeated the statements regarding triggering made in rejecting claims 1 and 6. Applicants respectfully point out again that there is no disclosure in Figure 5 of the nodes of the two decoders being triggered concurrently, *i.e.*, at the same time. At least for this reason, Figure 5 does not anticipate claims 18 and 22.

Other Claims

The above discussion addresses rejections of all independent claims of the application. Dependent claims should be patentable at least for the same reasons as their base claims and intervening claims, if any.

REQUEST FOR ALLOWANCE

In view of the foregoing, Applicants submit that all pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application are earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

Dated: **May 30, 2006**

By: _____

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